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Region II-North  
Thomas C. Thomas Building  
90 East Union Street  
Wilkes-Barre, Pa. 18701  
March 25, 1977

Lurgan Corporation  
Route 940  
White Haven, Pa. 18661

Attention: Kenneth H. Gibson  
President

Gentlemen:

On March 23, 1977, a member of the staff of this office inspected your plant located in Foster Township, Luzerne County. It was found that you have plans to install an air pollution control device on your furnaces. The provisions of Chapter 127 of the Rules and Regulations of the Department of Environmental Resources (Title 25) require such permits.

Enclosed for your use is a set of application forms for plan approval to construct or modify an air contamination source and a copy of Title 25, the Rules and Regulations of the Department of Environmental Resources. It will be necessary for you to complete these application forms and forward them to this office within thirty (30) days of receipt of this letter.

You are advised that failure to comply with the aforementioned rules and regulations of the Department constitutes unlawful conduct.

If you have any questions regarding the above, or desire clarification, please contact this office.

Very truly yours,

Babu H. Patel, Chief  
Engineering Services  
Bur. of Air Quality & Noise Control

BHP:GJT:gem  
cc: Div. of Abatement & Compliance  
File ✓ 40-000-567  
Enclosures

AR100068

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL RESOURCES  
BUREAU OF AIR QUALITY & NOISE CONTROL

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Application for Plan Approval to Construct,  
Modify or Reactivate an Air Contamination Source  
and/or Air Cleaning Device or for a Permit to Operate

1977

Read the instruction carefully before completing this form. Submit duplicate copies.

Section A Identity and Location of Air Contamination Source

1A. Application is being made for:

- |  |  |
|--|--|
| <input type="checkbox"/> Construction of New Source          | <input type="checkbox"/> Extension of Plan Approval          |
| <input type="checkbox"/> Reactivation of a Source            | <input type="checkbox"/> Amendment to a Previous Application |
| <input type="checkbox"/> Modification of Existing Source     | <input checked="" type="checkbox"/> Operating Permit         |
| <input type="checkbox"/> Installation of Air Cleaning Device | <input type="checkbox"/> Temporary Operating Permit          |
|  | <input type="checkbox"/> Extension of Operating Permit       |

1B. Type of source

Copper Recovery Furnaces

1C. Plant in which source is located

☐ NEW ☒ EXISTING

1D. Expected date of completion

Depends on result of tests.

1E. If source is new, does it replace another source (describe source replaced)

☐ YES ☐ NO

Not Applicable.

2A. Owner of source

Lurgan Corporation

2B. Employer I.D. No. (Federal)

#24-0855936

3A. Owners designation of source and/or plant if any

3B. Location of source (Street address or Route No.)

Pond Creek, R. D., Freeland, Penna.

Political Subdivision  
(Township, etc.)

Foster Twp.

County

Luzerne

3C. Mailing address (Street or P.O. Box, City, Zip Code)

P. O. Box 8, White Haven, Pennsylvania 18661

3D. Telephone No.

717-636-0250

4. Official signing application must be an agent of the Company having primary responsibilities for operation of the facility to which this application applies. Although he may not have participated in the design of the facility he should be responsible for approval of the design.

AFFIDAVIT

I, Kenneth H. Gibson, being duly sworn according to law depose and say that I am the official having primary responsibility for the design and operation of the facilities to which this application applies and that the information included in the foregoing application is true to the best of my knowledge, information and belief.

HAZLETON, LUZERNE COUNTY.

MY COMMISSION EXPIRES OCT. 27, 1980

Member, Pennsylvania Association of Notaries

Sworn to and subscribed before me this

28<sup>th</sup> day of April

1977

Notary Public

Signature

Kenneth H. Gibson

President

Title

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## Section B - Process Information

## 1. PROCESS EQUIPMENT

A. Manufacturer of Source

Hauck Manufacturing Company

B. Model No.

C. No. of units

4

D. Rated Capacity

4 ton/hour/unit

E. Rate under normal operation (Describe variations)

6 tons/day ---- total

F. Describe the process equipment (Give type, use, product, etc. on attached sheet)

Burning of insulated communication wire  
Box Furnace

G. Sketch flow diagram of process giving all (gaseous, liquid, and solid) flow rates (attach separate sheet). Also list all raw materials charged to process equipment and the amounts charged (tons/hour, etc.) at rated capacity (give maximum, minimum and average of both normal and occasional charges).

See diagram attached.

## 2. OPERATING SCHEDULE

6

hours/day

5

days/week

52

weeks/year

## 3. SEASONAL PERIODS (MONTHS)

all year

Operating  
toNon-Operating  
to

4. Describe fully the facilities provided to monitor and record all operating conditions that may affect the emission of air contaminants. Provide detailed information to show that the facilities provided are adequate.

None

## 5. Describe modifications to process equipment in detail

Addition of oxygen afterburner.

6. Type and method of disposal of all waste materials generated by this process

(Is a Solid Waste Disposal Permit Needed?)

☐ Yes☐ No )

Waste Ash -- on site disposal.

7. Briefly describe the method of handling the waste water from this process and its associated air pollution control equipment

(Is a Water Quality Management Permit needed?)

☐ Yes☒ No )

8. Attach any and all additional information necessary to perform a thorough evaluation of the extent and nature of emissions from this process.

## Section B - Process Information, Continued

9. FUEL AND POWER REQUIREMENTS					
TYPE	QUANTITY HOURLY	ANNUALLY	SULFUR	% ASH (WEIGHT)	BTU CONTENT
Oil No. 2 _____	6.2 GPH @ 60 ° F	36,000 x 10 <sup>3</sup> gal.	____ % by wt.	_____	141,850 BTU/gal. <del>xxxxx lbs/gal</del> <del>xxxxx</del>
Natural Gas N/A	SCFH	x 10 <sup>6</sup> SCF	gr/100 SCF		BTU/SCF
Gas (Other) N/A _____	SCFH	x 10 <sup>6</sup> SCF	gr/100 SCF		BTU/SCF
Coal N/A	TPH	Tons	% by wt.		BTU/lb.
Coke N/A	TPH	Tons	% by wt.		BTU/lb.
Other N/A _____					
Electric Power N/A	KWA	KWH	-----	-----	-----

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## Section C - Control Equipment

## 1. POTENTIAL PROCESS EMISSIONS (OUTLET FROM PROCESS, BEFORE ANY CONTROL EQUIPMENT)

A. Outlet particulate loading (lbs/hr or gr/SCF Dry)

Refer to report in your hands. (Spotts, Stevens, McCoy)

B. Specific gravity of particulate

C. Attach outlet particle size distribution information

D. Specify gaseous contaminants and concentration

Contaminant	Concentration
(1)	_____ ppm (Vol.) _____ lbs/hr
(2)	_____ ppm (Vol.) _____ lbs/hr
(3)	_____ ppm (Vol.) _____ lbs/hr

E. Outlet volume of exhaust gases

\_\_\_\_\_ ACFM

@ \_\_\_\_\_ °F

## 2. GAS CONDITIONER (IF APPLICABLE)

A. Water quenching ☐ Yes ☐ No

Water injection rate \_\_\_\_\_ GPM

B. Radiation and convection cooling ☐ Yes ☐ NoC. Air dilution ☐ Yes ☐ No \_\_\_\_\_ CFM

D. Gas conditioner outlet

\_\_\_\_\_ ACFM @ \_\_\_\_\_ °F

## 3. SETTLING CHAMBERS (IF APPLICABLE)

A. Manufacturer

B. Volume of gas handled

\_\_\_\_\_ ACFM @ \_\_\_\_\_ °F

C. Gas velocity

D. Dimensions

E. Retention time

F. Describe baffling

G. Inlet concentration  
(lbs/hr or gr/SCF Dry)H. Outlet concentration  
(lbs/hr or gr/SCF Dry)

I. Overall efficiency (%)

J. Water injection

☐ Yes ☐ No

K. Water injection Rate (GPM)

L. Attach particle size  
Efficiency curve

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## Section C - Control Equipment, Continued

## 4. INERTIAL AND CYCLONE COLLECTORS (IF APPLICABLE)

Not Applicable.

A. Manufacturer	B. Type	C. Model Number
D. Pressure Drop (water gage)	E. Inlet Gas Volume (ACFM)	F. Inlet Gas Temperature (°F)
G. Design inlet volume (ACFM)		
H. Inlet concentration (lbs/hr or gr/SCF Dry)	I. Outlet concentration (lbs/hr or gr/SCF Dry)	J. Overall efficiency (%)
K. Attach particle size efficiency curve		L. Number and diameter of cyclones
M. Describe inertial collector fully giving dimensions and method of operation		

## 5. CATALYTIC AND THERMAL AFTERBURNERS (IF APPLICABLE)

A. Manufacturer <u>Airco Industrial Gases</u>	B. Type <u>Oxygen/Oil Burner</u>	C. Model No. <u>C25-2013</u>
D. Minimum temperature maintained (°F)  <u>2,200</u>	E. Retention time at this temperature (sec)  <u>0.1 (turbulent flow)</u>	F. Volume of gases handled (ACFM @ °F)  <u>218,000 ACFM/min.</u>
G. Design inlet volume (ACFM) <u>50 Oxygen</u>	H. No. and capacity (BTU/hr) of burners <u>1 burner 1.5 million BTU/hour</u>	
I. Catalyst used <u>none</u>	J. Expected temperature rise across catalyst <u>none</u>	
K. Are temperature sensing devices being provided to measure the temperature rise across the catalyst? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
L. Is a heat exchanger system used for heat recovery? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
M. Inlet concentration  ----- ppm (Vol.)	N. Outlet concentration  ----- ppm (Vol.)	O. Overall efficiency (%)  -----

P. Show that this unit is capable of complying with § 123.31 of Chapter 123

See D, E, &amp; F above.

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*Section C - Control Equipment, Continued*

FABRIC COLLECTORS (IF APPLICABLE)

Not Applicable.

A. Manufacturer		B. Model No.	
C. Air to cloth ratio (minimum, average, and maximum)		D. Type of Fabric  Material _____ <div style="float: right; margin-top: 10px;"> <input type="checkbox"/> Felted  <input type="checkbox"/> Woven  <input type="checkbox"/> Felted-Woven         </div>	
E. Pressure Drop (Water gage)	F. Volume of gases handled (ACFM)	G. Inlet gas temperature (°F)	
H. Design inlet volume (ACFM)			
I. Inlet concentration (lbs/hr or gr/SCF Dry)	J. Outlet concentration (lbs/hr or gr/SCF Dry)	K. Overall efficiency (%)	
L. No. of compartments	M. No. of bags per compartment		
N. Can each compartment be isolated for repairs and/or bag replacement?  <div style="text-align: right;"> <input type="checkbox"/> Yes      <input type="checkbox"/> No         </div>			
O. Bag dimensions <div style="display: flex; justify-content: space-around; margin-top: 5px;"> <span>Length _____</span> <span>Diameter _____</span> </div>			
P. Method and frequency of bag cleaning (describe in detail). Give pneumatic flushing pressure if applicable.			
Q. Are temperature controls provided? (Describe in detail)			
R. Is baghouse insulated	S. Maximum temperature bags can withstand (°F)	T. Dew point at maximum Moisture (°F)	
U. Describe method of dust removal from equipment			

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## Section C - Control Equipment, Continued

## 7. SCRUBBERS (IF APPLICABLE)

Not Applicable.

A. Manufacturer

B. Type

C. Model No.

D. Pressure drop (water gage) across scrubber only. Do not include duct losses

E. Gas temperatures ( $^{\circ}$ F)

at inlet \_\_\_\_\_ outlet \_\_\_\_\_

F. Volume of gases handled at  
inlet temperature (ACFM)

G. Design inlet volume (ACFM)

H. Water flow rate (GPM)

I. Scrubber medium

J. Inlet concentration  
(lbs/hr or gr/SCF Dry)K. Outlet concentration  
(lbs/hr or gr/SCF Dry)

L. Overall efficiency (%)

M. Attach particle size efficiency curve

N. Describe equipment provided to measure pressure drop and water flow rate to scrubber

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## Section C - Control Equipment, Continued

## 8. ELECTROSTATIC PRECIPITATORS (IF APPLICABLE)

Not Applicable.

A. Manufacturer		B. Model No.	
C. Pressure drop (water gage)	D. Volume of gases handled (ACFM)	E. Design inlet volume (ACFM)	
F. Maximum operating temperature ( $^{\circ}$ F)	G. Retention time (sec)		
H. Linear velocity (ft/sec)	I. Voltage	J. Resistivity of dust collected (ohm-centimeter)	
K. Gas distribution grids? <input type="checkbox"/> Yes <input type="checkbox"/> No	L. <input type="checkbox"/> Single stage <input type="checkbox"/> Multiple stage		
M. Inlet concentration (lbs/hr or gr/SCF Dry)	N. Outlet concentration (lbs/hr or gr/SCF Dry)	O. Overall efficiency (%)	
P. Attach particle size efficiency curve			
Q. Method of removing dust from collecting electrodes			

R. Describe Method of dust removal from equipment

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## Section C - Control Equipment, Continued

## 9. ADSORPTION AND ABSORPTION EQUIPMENT (IF APPLICABLE)

Not Applicable.

A. Manufacturer		B. Type	C. Model No.
D. Volume of gases handled (ACFM)			E. Inlet temperature (°F)
F. Design inlet volume (ACFM)			G. Pressure drop (water gage)
H. Absorbent or adsorbent		I. Retention time (sec)	
J. Inlet concentration	K. Outlet concentration		L. Overall efficiency (%)
M. Method and frequency of regeneration			
N. Describe absorption or adsorption equipment fully			

## 10. OTHER CONTROL EQUIPMENT (IF APPLICABLE)

A. Manufacturer		B. Type	C. Model No.
D. Volume of gases handled (ACFM)		E. Design inlet volume (ACFM)	F. Inlet temperature (°F)
G. Inlet concentration (lbs/hr or gr/SCF Dry)	H. Outlet concentration (lbs/hr or gr/SCF Dry)		I. Overall efficiency (%)
J. Attach particle size efficiency curve or other efficiency information			
K. Describe fully giving important parameters and method of operation			

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*Section C - Control Equipment, Continued*

## 11. COSTS

A. Cost of all control equipment including installation costs (List individual controls separately)

See list of costs attached.

B. Estimated annual operating costs

## 12. Describe modifications to control equipment in detail

None

## 13. Discuss briefly the noise potential of the process and related control equipment and describe any devices used to reduce noise. Give costs.

None.

## 14. Attach manufacturer's performance guarantees and/or warranties for each of the major components of the control system (or complete system).

Airco.

## 15. Attach the maintenance schedule for the control equipment and any part of the process equipment that if in disrepair would increase the air contaminant emissions. Periodic maintenance reports are to be submitted to the Department.

Airco.

## 16. Attach any and all additional information necessary to thoroughly evaluate the control equipment.

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## Section D - Flue And Air Contaminant Emission Information

## 1. STACK AND EXHAUSTER

A. Exhauster (attach fan curves)

30 HP @ 1800 RPM

B. Stack height (ft)

50 feet

C. Stack diameter (ft)

3 feet

D. Weather cap

☐ Yes ☒ No

E. Indicate on an attached sheet the location of sampling ports with respect to exhaust fans, breeching, etc. Give all necessary dimensions.

In stack 20 feet above roof.

F. Can the control equipment be bypassed? (If Yes, explain)

☒ Yes ☐ NoManual shut off,

## 2. ATMOSPHERIC EMISSIONS

A. Particulate matter emissions (lbs/hr or gr/SCF Dry)

0.4 lbs./hour or 0.001 gr/SCF

B. Gaseous contaminant emissions

See report ---- not applicable.

Contaminants

Concentration

(1) \_\_\_\_\_ ppm (Vol.) \_\_\_\_\_ lbs/hr

(2) \_\_\_\_\_ ppm (Vol.) \_\_\_\_\_ lbs/hr

(3) \_\_\_\_\_ ppm (Vol.) \_\_\_\_\_ lbs/hr

C. Outlet volume of exhaust gases

218,000 CFM(a) 2200 °F----- % Moisture

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*Section E Miscellaneous Information*

- 1) Describe fully facilities to monitor and record the emission of air contaminants. Provide detailed information to show that the facilities provided are adequate. Include cost and maintenance information. Periodic maintenance reports are to be submitted to the Department.

None.

2. Attach Air Pollution Episode Strategy (if applicable)

Not Applicable.

- 3) Briefly describe the general nature of the area in which the source is located.

Rural Area -- nearest building 3/4 mile.

4. Attach calculations and any additional information necessary to thoroughly evaluate compliance with all the applicable requirements of Article III of the Rules and Regulations of the Department of Environmental Resources and those requirements promulgated by the Administrator of the United States Environmental Protection Agency pursuant to the provisions of the Clean Air Act.

5. List all attachments made to this Application.

Source Test

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Costs of Control equipment:

BILL OF MATERIAL (Airco)

Item	Airco Part No.	Quantity	Description	Price
1	1821	1	1" Strainer 100 Mesh Oxy	\$ 94.00
2	841-0005	1	Airco Press. Ca. 0-200 PSI	10.00
3	1815	1	Flow Indicator 0-100" #227 Oxy	370.00
4	1744	1	1" Orifice Fl. 300 PSI	133.00
5	1746	1	1" Orifice Plate - Bored to spec.	46.00
6	1683	1	1" Ball Valve #780 TF Oxy	36.00
7	841-0014	1	Airco Oil Press. Ca.	10.00
8	1687	1	1/2" Ball Valve - Oil	18.00
9	1677	2	1/2" Globe Valve - Oxy	37.00 ea.
10	841-0014	1	Airco Press. Ca. - Air 0-100 PSI	10.00
				<u>\$ 801.00</u>

ALL ITEMS BELOW ARE QUANTITIES REQUIRED PER FURNACE

11	1	1	3/Way Off-On Switch	15.00
12	1657	1	3/4" Solenoid Valve Oxy	86.00
13	1774	1	1/2" X 6 Ft. Bronze Flexible Hose	65.00
14	1660	1	1/2" Solenoid Valve - Oil	55.00
15	1661	2	1/2" Solenoid Valve - Air	56.00 ea.
16	1712	2	1/4" Check Valve - Air #456-B-2	12.00 ea.
17	1707	1	3/8" Check Valve - Oil #458-B-2	12.00
18	1697	1	1/2" Needle Valve - Oil	25.00
19		3	1/4" Globe Valve	18.00 ea.
20		2	1/4" I.D. Hose X 6 Ft. with 1/4" NPT end conn.	30.00 ea.
21	1768	2	1" X 6 Ft. Flexible Brz. Hose	95.00 ea.
22	841-0014	1	Airco Pressure Ca. 0-100 PSI Water	10.00
23		1	3/4" Tip Mix Burner Water Cooled	1,000.00
24	1709	1	1/2" Check Valve 233-B-4-PP Oxy	40.00
				<u>\$ 1,748.00</u>
				<u>\$ 2,549.00</u>

\$ 1,748.00 X 4 = \$6,992.00  
+801.00

\$7,793.00 -- total estimate for materials

NOTE: This estimate does NOT include labor costs or additional duct work.

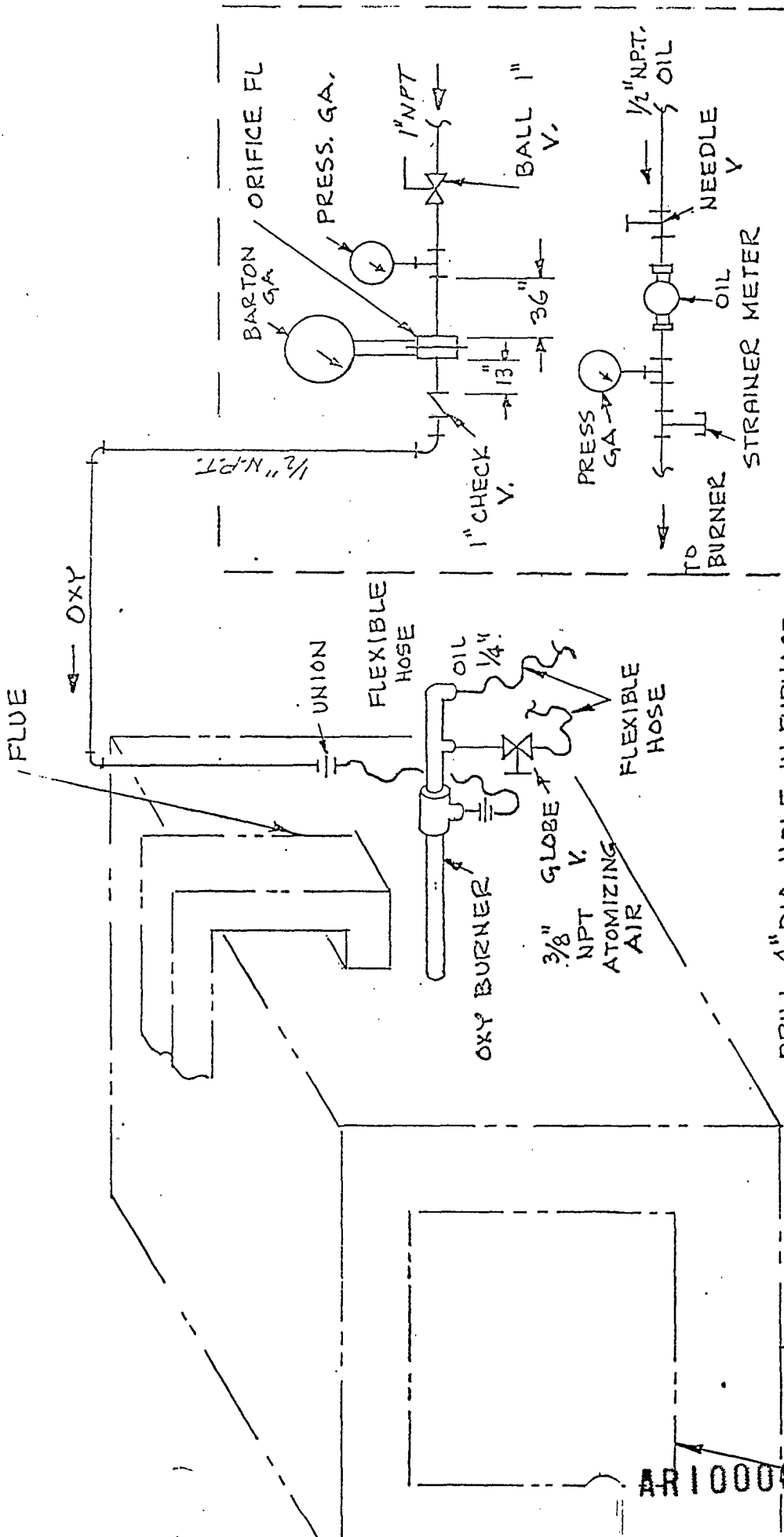
den

AR100081

LURGAN CORP.  
 1000 RUM PA.

AIRCO OXY-FUEL BURNER SYSTEM (FOR TEST ONLY)

6-...  
 REVERSE  
 SEE



DRILL 4" DIA HOLE IN FURNACE  
 CENTERED APPROX 8"  
 BELOW FLUE FOR AIRCO  
 BURNER

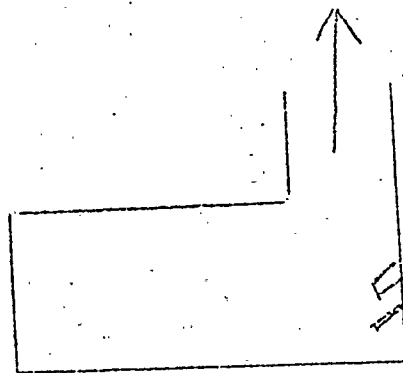
THIS EQUIPMENT TO BE  
 MOUNTED ON WALL AND  
 PIPING TO AND FROM THIS

PANEL TO BE SUPPLIED BY  
 CUSTOMER

AR100082

Burned Gases

Insulated  
Cu. Wire



Hack Burner - "201"  
Aince Burner - oxygen

Ave. Chg. / Furn / Hr.      1 ton

See page 2.

AR100083



SOURCE #1

Fabric covered wire, polyethylene coated wire and polypropylene coated wire are the three (3) types being used in the wire reclamation process at Lurgan Corporation. From page 523, Table 139 of the Air Pollution Engineering Manual, APCD County of Los Angeles, second edition, emission data was obtained for burning of similar types of insulation as that burned at Lurgan Corporation. From this data, an engineering estimate of 0.50 grains of particulate per standard cubic foot of air was made and converted to pounds per hour as follows:

$$\frac{0.50 \text{ gr}}{\text{scf}} \times \frac{4000 \text{ scf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{1 \text{ lb}}{7000 \text{ gr}} = 17.1 \text{ lb/hr}$$

SOURCE #2

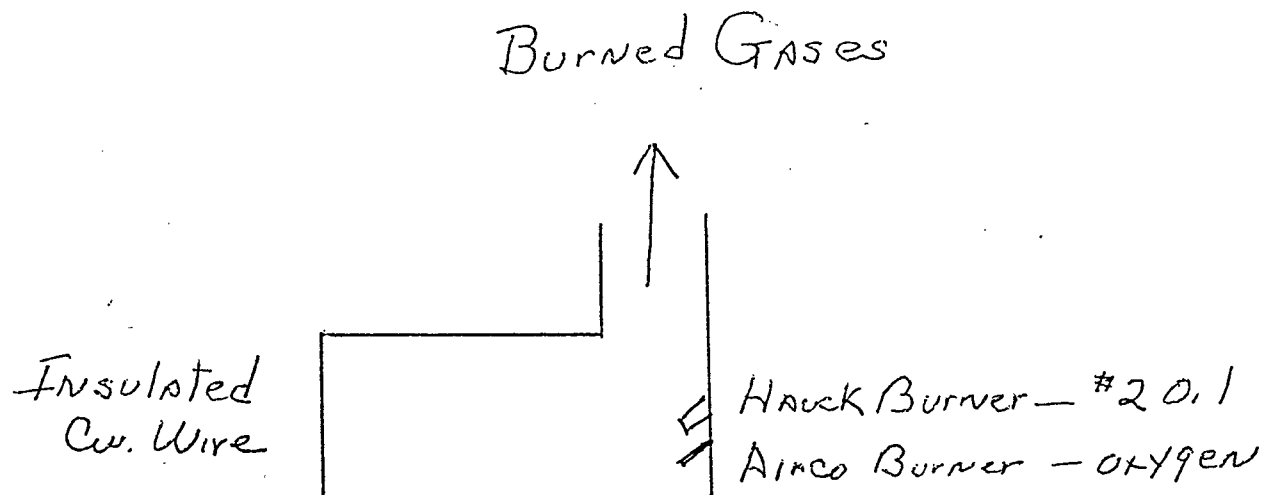
Knowing from experience that the hoods in front of the furnace doors exhaust small amounts of particulate when the doors are opened (intermittently), an estimate was made of 0.01 grains of particulate per standard cubic foot or -

$$\frac{0.01 \text{ gr}}{\text{scf}} \times \frac{50,000 \text{ scf}}{\text{min}} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{1 \text{ lb}}{7000 \text{ gr}} = 4.3 \text{ lb/hr}$$

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# Lurgan Corporation

P. O. Box 8  
White Haven, Pennsylvania 18661  
717-636-0250



Ave. Chg. / Furn. / Hr. = 1 ton

See page 2.

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